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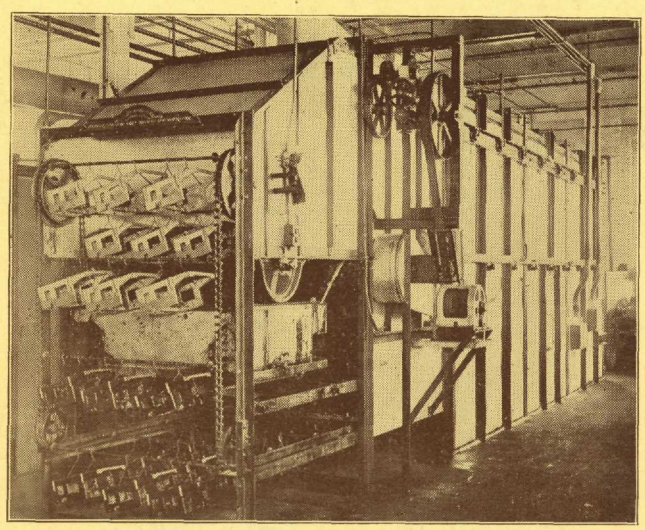
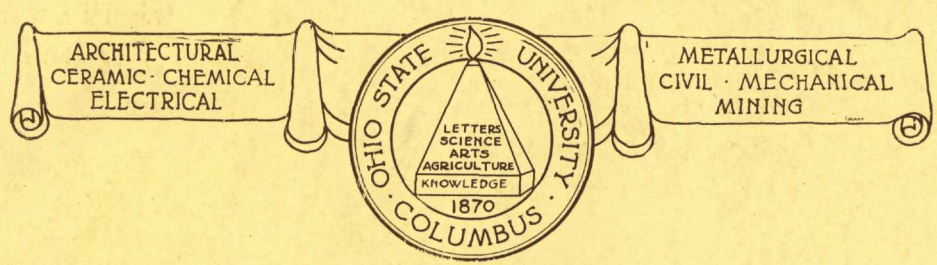
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OHIO STATE UNIVERSITY MAY 8 1925
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OHIO STATE ENGINEER



AN ELECTRIC ENAMELING OVEN
A continuous conveyor type electric oven used for
enameling typewriters. See page 9.

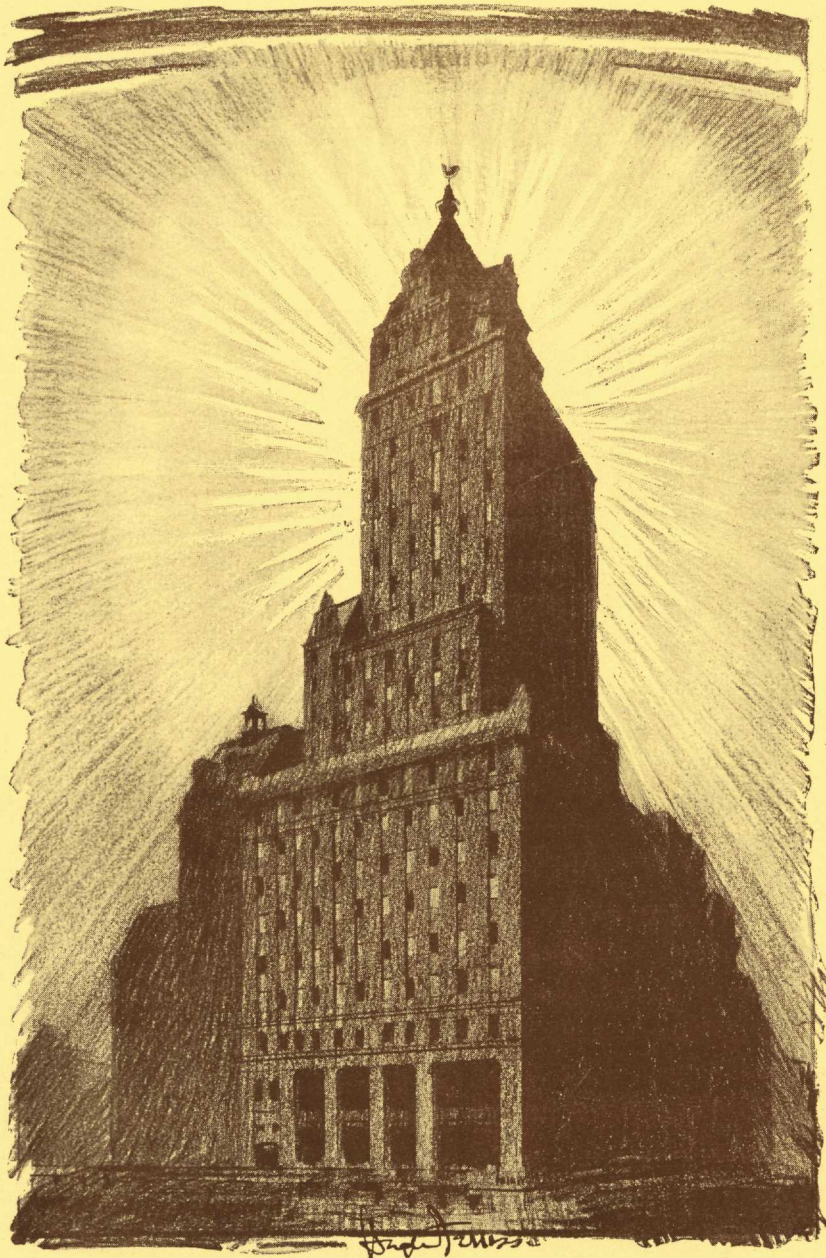
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MAY, 1925

Vol. VIII OHIO STATE UNIVERSITY No. 4

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*The Heckscher Building
New York City*

WARREN & WETMORE
Architects

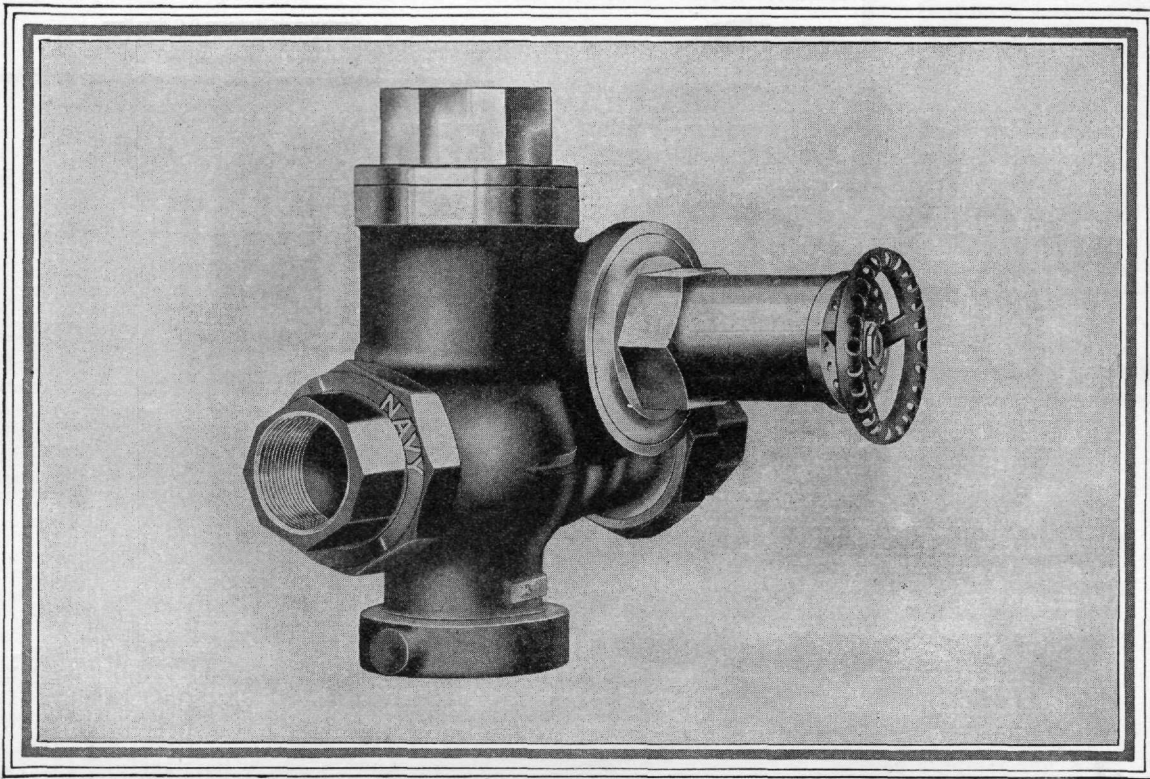
Architecture—Today and Tomorrow

THE great buildings of today, designed in masses which rear rugged, mounting profiles into the sky, foretell even greater and more massive structures for the next half century. Always a close co-ordination of architecture and engineering, of design and construction, the architecture of the future will find architect and engineer working ever more closely together.

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Kansas City Athletic Club. Holt, Price & Barnes Architects. Kornbrodt Korsch Company, Sheet Metal Contractor. Because of its enduring, rust-resistant qualities, ARMCO Ingot Iron was used for all air intakes, for connecting cases for heating coils, etc.



Lincoln Memorial, Washington, D. C. Henry Bacon, Architect. 17,000 pounds of ARMCO Ingot Iron was used for the skylights. What a tribute to the permanence of commercially pure iron!



Municipal Building, New York City. McKim, Mead & White, Architects. ARMCO Iron Herringbone Metal Lath is used throughout.

Gentlemen, the ARCHITECT maker of monuments to mankind

IN the first century B. C., Marcus Vitruvius, Architect, named the three fundamentals of his art—"stability, utility, and beauty."

How faithfully the Architect of today adheres to these principles! Look about you!

Utility? There is not a wasted inch in the modern building, be it home or school, factory or hospital or skyscraper . . .

Beauty? Our cities are full of it—a new beauty typifying a new civilization . . .

Stability? *Because of the Architect's knowledge of materials, our buildings of today will remain monuments to mankind through ages yet to come!*

For instance, there is iron

Ask an architect why he specifies ARMCO Ingot Iron—he will tell you that Ingot Iron is the purest iron made. He will point out that purity in iron means *endurance*—since it is the foreign matter in iron that causes it to rust.

He knows that Ingot Iron, because of its great purity, is of more even grain structure than other ferrous metals—that it is more

ductile—easy to bend into different shapes. It takes and *holds* zinc coating as no other metal will. And that is why he specifies ARMCO Ingot Iron for sheet metal work exposed to corrosive influences.

Its use means long life and freedom from heavy upkeep expense. And this applies relatively as much to the modest home as it does to vast commercial structures. You'll find it in general use for flashing, roofing, siding, rain gutters, downspouts, water tanks, ventilating systems, window and skylight frames, lath, cornices, culverts, smokestacks and the like.

Whether you are building or replacing—whether you require iron by the pound or by the ton—always look for the blue Armco triangle on the sheet metal you buy and always ask this question: "*Is it made of ARMCO Ingot Iron?*"

THE AMERICAN ROLLING MILL CO
MIDDLETOWN OHIO

(EXPORT)

THE ARMCO INTERNATIONAL CORPORATION
MIDDLETOWN OHIO CABLE ADDRESS—ARMCO

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Practically eighty cents of every dollar you pay for sheet metal work goes to labor—regardless of what metal is used. It is poor economy to use ordinary iron or steel when Ingot Iron costs but a few cents more. Don't waste that eighty cents by using metal less durable than Ingot Iron.

ARMCO

TRADE MARK

INGOT IRON

The Purest Iron Made

IS IT MADE OF ARMCO INGOT IRON?

Every day more and more people are making sure of enduring sheet metal work by asking this question.



Designers and builders who have occasion to specify sheet metal, find in ARMCO Ingot Iron a durable metal that has won widespread acceptance. By years of national advertising, the merits of ARMCO Ingot Iron have been made known to millions. The blue triangle is recognized as the mark of sheet metal quality.

This reproduced *Saturday Evening Post* Advertisement is just one of the many ARMCO advertisements that are designed to help the building profession.

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MAY, 1925

No. 4

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What Is Timken Dual Duty?

The twist of the rope tells that the shell spins 'round and 'round even as it thrusts its way forward. There is both revolving motion and forward (endwise) motion.

Tendency toward motion in more than one direction, at one time, is very common mechanically. The wheels of a motor car are spinning around and are also pushed from the side, due to the weight of the car, slope of the road, and the force of turning corners. The discs

of a plow, forced forward at an angle, not only revolve, but are thrust sidewise at the earth ahead. And the whirling pulleys in a machine shop are also being whipped from the side by the weaving, swishing belts.

Pure spinning or revolving motion is known as *Radial* motion to engineers. The sidewise or pushing motion is quite naturally called *Thrust*. It stands to reason that both the *radial* forces and the

thrust forces, almost invariably combined, must be properly handled by any bearing qualified for most efficient machine design.

The Timken Tapered principle enables Timkens to do Dual Duty, carrying both radial and thrust loads. This is one of the advantages which has made the use of Timkens so nearly universal. All types of machinery, including motor cars, are being Timken-equipped by leading engineers.

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